

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:
KURT R. GANDERUP
26877 TOURNEY ROAD
VALENCIA, CA 91355-1847

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

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|---|---|
| Date of mailing (day/month/year) 25 APR 2007 | |
| FOR FURTHER ACTION See paragraph 2 below | |
| Applicant's or agent's file reference USB-424 | |
| International application No. PCT/US05/09931 | International filing date (day/month/year) 24 March 2005 (24.03.2005) |
| Priority date (day/month/year) 24 March 2004 (24.03.2004) | |
| International Patent Classification (IPC) or both national classification and IPC IPC: A01N 59/14(2006.01); D06M 11/00(2006.01) USPC: 424/659,660,657;8/116.1 | |
| Applicant U.S. BORAX INC. | |

1. This opinion contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|--|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the opinion |
| <input type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |

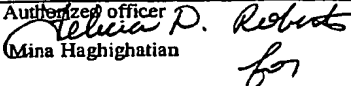
2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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| Name and mailing address of the ISA/ US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201 | Date of completion of this opinion 01 April 2007 (01.04.2007) | Authorized officer  Mina Haghighatian Telephone No. 571-272-0600 |
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Form PCT/ISA/237 (cover sheet) (April 2005)

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US05/09931

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of:

- ☒ the international application in the language in which it was filed
☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

- ☐ a sequence listing
☐ table(s) related to the sequence listing

b. format of material

- ☐ on paper
☐ in electronic form

c. time of filing/furnishing

- ☐ contained in the international application as filed.
☐ filed together with the international application in electronic form.
☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US05/09931

Box No. V Reasoned statement under Rule 43 bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | |
|-------------------------------|--------------------|-----|
| Novelty (N) | Claims <u>1-23</u> | YES |
| | Claims <u>NONE</u> | NO |
| Inventive step (IS) | Claims <u>NONE</u> | YES |
| | Claims <u>1-23</u> | NO |
| Industrial applicability (IA) | Claims <u>1-23</u> | YES |
| | Claims <u>NONE</u> | NO |

2. Citations and explanations:

Claims 1-23 meet the criteria set out in PCT Article 33(2), because the prior art does not teach or fairly suggest a method of inhibiting the crystallization of boric acid comprising the steps involved or a method of protecting wood or lignocellulosic-based products against decay and insect attack comprising the steps involved.

Claims 1-11 and 21-23 lack an inventive step under PCT Article 33(3) as being obvious over Hammons et al (5,928,672). Hammons et al disclose a polyborate composition suitable for use in agricultural fertilizer preparations. The polyborate is formed as the reaction product of a boric acid compound with one or more cyclic amines in aqueous solution. The resulting polyborate is extremely temperature stable and does not crystallize during preparation, storage or use. A method of preparation necessary to result in a non-crystallizing polyborate is also provided.

Claims 12-15 lack an inventive step under PCT Article 33(3) as being obvious over Rearick (6,488,718). Rearick discloses compositions and methods of rendering cellulosic materials fire retardant, and articles of manufacture including the materials are disclosed. The compositions include an amino acid, protein and/or peptide and optionally include one or more crosslinking and/or coupling agents.

Claims 16-20 lack an inventive step under PCT Article 33(3) as being obvious over Poppen et al (6,123,756). Poppen et al teach a wood-protecting agent, particularly for protection of wood against dry-wood destroying insects, which comprises a wood preservative carrier and the combination of at least one insect juvenile hormone or their analogue or mimetics and one or more triazole compounds to achieve a synergistic increase in effectiveness of said formulation.

Claims 1-23 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.